

REMARKS

Entry of the foregoing amendments and reconsideration of the above-identified application are respectfully requested in view of the remarks that follow.

I. Status of Claims:

Claims 1, 3-9 and 11-16 were pending prior to this submission. Claims 2 and 10 were canceled in a Preliminary Amendment filed July 25, 2006. By this response, claims 1, 3 and 9 have been amended.

More particularly, the amendment to the “coordinate conversion means” limitation recited in apparatus claim 1 clarifies that the reference values also include the conversion constants to the monitor screen. Support for this amendment can be found in the Specification, as originally filed, at page 8, lines 23-28. Furthermore, the amendment to the “correction means generating relational expressions” limitation clarifies that the relational expressions are generated based on (i) the monitor coordinates related to the actual target; (ii) the converted monitor coordinates; and (iii) the deviations between them. Support for this amendment can be found in the Specification, as originally filed, at page 11, line 28 – page 13, line 12. Method claim 9 is being similarly amended.

II. Claim Objections

Claims 3 and 4 are objected to because of informalities. Claim 3 has been amended to depend from claim 1, thereby removing the informality. Applicant requests that this objection be withdrawn.

III. Rejection Under 35 U.S.C. §103:

Claims 1, 3-9 and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,785,404 (“Shimazaki”) in view of U.S. Patent No. 6,201,882 (“Tanaka”).

Applicant respectfully traverses this ground of rejection because the subject matter of independent claims 1 and 9 is neither disclosed nor suggested by the combination of Shimazaki and Tamaka.

In the present invention, as recited in independent claims 1 and 9, the relational expressions are generated based on (i) the monitor coordinates related to the actual target, (ii) the converted monitor coordinates and (iii) the deviations between them. Also, the coordinate conversions parameters are corrected so that the square-sum of the deviation is minimized. Also, in the present invention, as recited in independent claims 1 and 9, the number of relational expressions is larger than the number of the coordinate conversion parameters to be corrected. Accordingly, the correction becomes more accurate as the number of relational expressions increases even if parameters other than the coordinate conversion parameters include errors.

On the other hand, in Shimazaki, the mounting parameters of the camera are corrected so that the monitor coordinates related to the actual target and the monitor coordinates related to the virtual target are equal. Also, in Shimazaki, the number of relational expressions is equal to the number of the parameters to be corrected. Accordingly, the accuracy of correction cannot be improved even if the number of relational expressions increases. Further, Shimazaki does not disclose “coordinate conversion parameters including internal parameters of the camera itself, attachment parameters for attaching the camera to the vehicle and conversion constants to the monitor screen” as recited in newly amended claims 1 and 9.

Regarding Tanaka, although Tanaka discloses minimizing deviation, the deviation to be minimized in Tanaka is not “deviations between the monitor coordinates of the image of the actual targets actually captured by the camera and the corresponding monitor coordinates in the

monitor coordinate system of the actual targets which has been subjected to the coordinates conversion" as recited in claims 1 and 9.

For the foregoing reasons, 1 and 9 are not obvious based on Shimazaki in view of Tanaka. Claims 3-8 depend from claim 1 and claims 11-16 depend from claim 9, and are allowable for at least that reason. Applicant, therefore, requests that this ground of rejection be withdrawn.

CONCLUSION

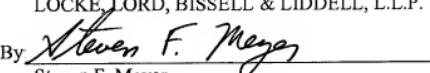
Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any fees which may be required for consideration of this Document to Deposit Account No. 504827, Order No. 1004378.53230.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 504827, Order No. 1004378.53230.

Respectfully submitted,
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Dated: January 31, 2011

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